

1. Choose the **smallest** set of Real numbers that the number below belongs to.

$$-\sqrt{\frac{52900}{100}}$$

- A. Whole
 - B. Integer
 - C. Not a Real number
 - D. Irrational
 - E. Rational
-

2. Simplify the expression below and choose the interval the simplification is contained within.

$$13 - 3^2 + 2 \div 11 * 12 \div 19$$

- A. $[4.09, 4.14]$
 - B. $[21.99, 22.07]$
 - C. $[22.11, 22.5]$
 - D. $[3.74, 4.09]$
 - E. None of the above
-

3. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-5 - 3i)(6 + 9i)$$

- A. $a \in [-7, 0]$ and $b \in [-66, -61]$
- B. $a \in [-62, -56]$ and $b \in [24, 33]$
- C. $a \in [-62, -56]$ and $b \in [-27, -22]$
- D. $a \in [-34, -25]$ and $b \in [-27, -22]$
- E. $a \in [-7, 0]$ and $b \in [58, 68]$

-
4. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-5 - 8i)(-3 + 7i)$$

- A. $a \in [-43, -35]$ and $b \in [-59, -58]$
 - B. $a \in [-43, -35]$ and $b \in [56, 61]$
 - C. $a \in [13, 17]$ and $b \in [-57, -49]$
 - D. $a \in [69, 72]$ and $b \in [7, 12]$
 - E. $a \in [69, 72]$ and $b \in [-12, -7]$
-

5. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{9}{-7} + 25i^2$$

- A. Not a Complex Number
 - B. Irrational
 - C. Pure Imaginary
 - D. Rational
 - E. Nonreal Complex
-

6. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\sqrt{\frac{1936}{0}} + \sqrt{154}i$$

- A. Not a Complex Number
- B. Rational
- C. Pure Imaginary
- D. Nonreal Complex

E. Irrational

7. Choose the **smallest** set of Real numbers that the number below belongs to.

$$-\sqrt{\frac{25}{0}}$$

- A. Not a Real number
 - B. Rational
 - C. Integer
 - D. Whole
 - E. Irrational
-

8. Simplify the expression below and choose the interval the simplification is contained within.

$$1 - 16 \div 12 * 18 - (15 * 8)$$

- A. $[-143, -138]$
 - B. $[-306, -303]$
 - C. $[117.93, 121.93]$
 - D. $[-122.07, -113.07]$
 - E. None of the above
-

9. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{-27 + 44i}{1 + 6i}$$

- A. $a \in [4, 7.5]$ and $b \in [5, 6]$
- B. $a \in [236.5, 237.5]$ and $b \in [5, 6]$

- C. $a \in [-8.5, -7]$ and $b \in [-4, -2]$
D. $a \in [4, 7.5]$ and $b \in [205, 207]$
E. $a \in [-27.5, -26.5]$ and $b \in [6, 8.5]$
-

10. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{54 + 77i}{-4 + 5i}$$

- A. $a \in [-15, -14]$ and $b \in [-1.5, -0.5]$
B. $a \in [4, 4.5]$ and $b \in [-579, -577]$
C. $a \in [168.5, 169.5]$ and $b \in [-16, -14]$
D. $a \in [-14, -12.5]$ and $b \in [15, 16]$
E. $a \in [4, 4.5]$ and $b \in [-16, -14]$
-